

# **Watersheds, the Water-Cycle, and You**

**WSU Cooperative  
Extension King County**

# **Watersheds, the Water-Cycle and You**

- **What is a Watershed**
- **The Water-Cycle**
- Natural Watershed Features
- Humans and Watersheds

# The world's water

- Oceans and seas 97.2%
- Icecaps and glaciers 2.15%
- Ground water 0.62%
- Lakes
  - Fresh water 0.009%
  - Inland seas/salt water 0.008%
- Soil moisture 0.005%
- Atmospheric water 0.001%
- Rivers and streams 0.0001%

**If two gallons represents  
all the water on earth, then:**

- **All fresh water =  $\frac{7}{8}$  cup + 6 drops**
- **Icecaps & glaciers = 11 tablespoons**
- **Ground and soil water = 3 tablespoons +  $\frac{1}{2}$  teaspoon**
- **Lakes = 8 drops!**
- **Atmospheric water = 1 drop**
- **Rivers and streams = < 1 drop**

## **What is a watershed?**

- **An area of land which drains all precipitation and runoff (water, sediment, and dissolved materials) to a common body of water (e.g., a lake, the ocean, or some point along a stream or river).**

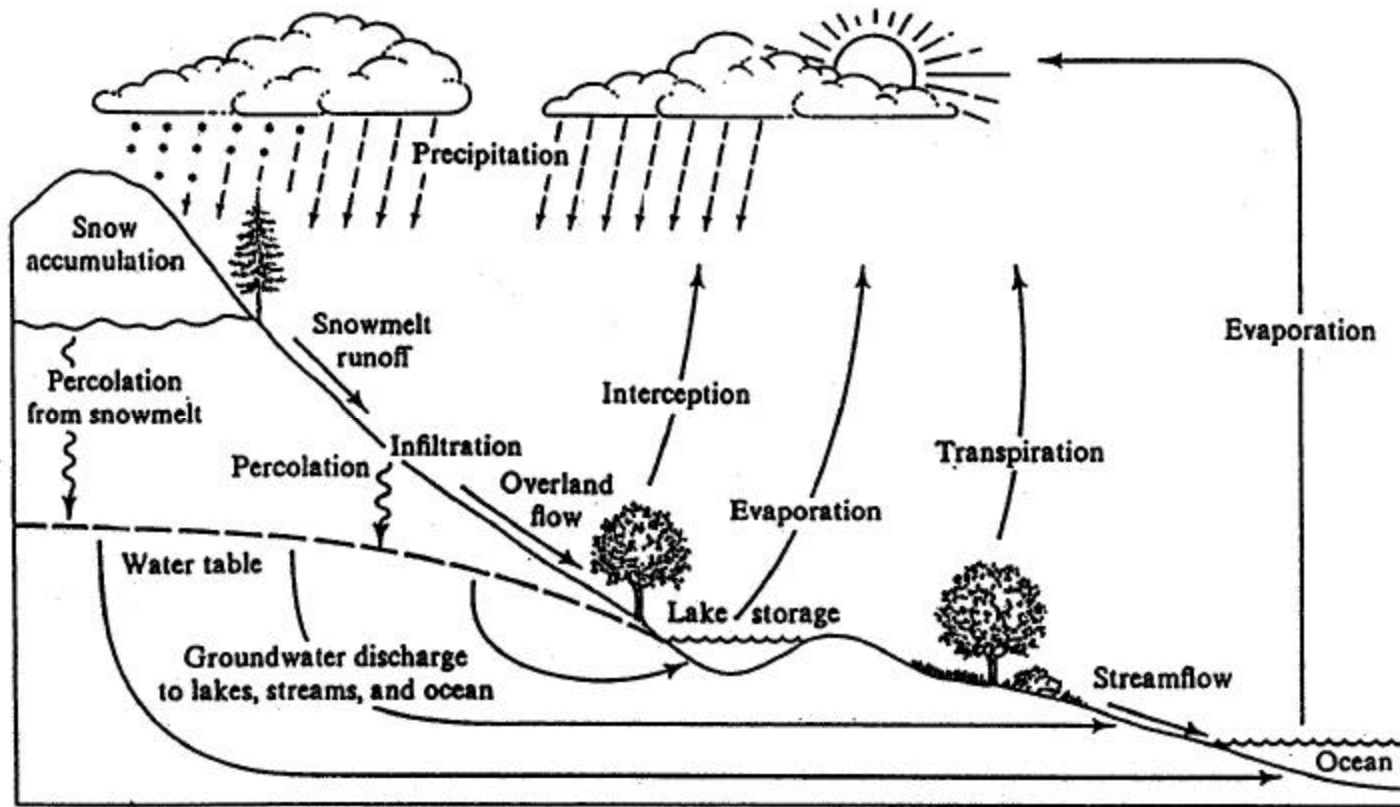




# Major King County Watersheds



# The Hydrologic Cycle



From Dunne and Leopold, 1978 Water in Environmental Planning



# Major Hydrologic Cycle Processes

- **Evaporation**
- **Condensation/Precipitation**
- **Interception**
- **Evapotranspiration**
- **Overland Flow/Snow Melt Runoff**
- **Infiltration/percolation**
- **Interflow**
- **Surface and Groundwater Flow**

# From Ocean to Air

- **Evaporation**
- **Condensation and precipitation**



# From Sky to Land

- Precipitation
  - Rain (37 inches/year in Seattle)
  - Snow, Sleet, Hail



# Water and Trees



- Interception and Evaporation
- Transpiration through needles/leafs

# Overland and Underground

- Overland flow or snowmelt runoff
- Infiltration
- Near surface interflow
- Percolation to groundwater



# Surface Water (where we see it)

- Streams filled up by:
  - Snow melt runoff
  - Overland flow
  - Resurfacing interflow and groundwater



# Human Alteration of Water Cycle

- We use water for many purposes; can you name some?
- How does urbanization affect the water-cycle?
- Where does your water come from? Where does it go?